

**REMARKS**

Claims 1 through 19 are pending in this application.

**I. OBJECTION TO THE SPECIFICATION**

In paragraph 1 of the Office action, the Examiner objected to the Abstract. Specifically, the Examiner stated that the term “comprises” at line 2 should be avoided.

In response, “comprises” has been changed to “includes” to avoid the basis for the objection. Accordingly, withdrawal of the objection to the Abstract is respectfully requested.

In paragraph 3 of the Office action, the Examiner objected to the specification. Specifically, the Examiner stated that “detecting a paper jam” and “process for manufacturing an electro photo multifunction apparatus” lack proper antecedent basis.

First, Lim respectfully submits that it is inherent in the specification to detect a paper jam before fixing it. It is very well known in the art to detect paper jams before fixing them, and therefore an artisan of ordinary skill would expect a paper jam detection device to be used in connection with fixing paper jams. For example, U.S. Pat. No. 4,878,428 (“Control Method Of Transporting A Cut Sheet In A Printing Station And Apparatus Using The Same”), issued to Watarai on November 7, 1989, discloses detecting a paper jam within a feeding unit as the first step of claim 1. Other prior art showing that this is well known includes U.S. Pat. No. 5,461,460 (“Method for

eliminating a paper jam in an image forming system”), issued to Lee on October 24, 1995, wherein the first step mentioned in the Abstract is detecting a paper jam; and U.S. Pat. No. 5,448,338 ("Image forming device"), issued to Masuda, et al. on September 5, 1995, wherein the Background section of the specification states that, in general, a reproduction apparatus has a sensor for detecting paper jams. In addition, claim 9 as originally presented had a detecting step. The original claims are part of the disclosure in the specification. *Northern Telecom, Inc. v. Datapoint Corp.*, 908 F.2d 931, 938, 15 USPQ2d 1321, 1326 (Fed. Cir. 1990), *cert. denied*, 498 U.S. 920 (1990) (“The original claims as filed are part of the patent specification”); *Ex parte Porter*, 25 USPQ2d 1144, 1146 (BPAI 1992) (holding that original claims constitute part of the original disclosure).

Second, the objection is made to independent claim 13, directed to a “process for manufacturing an electro photo multifunction apparatus,” on the ground that it lacks an antecedent in the specification. Lim respectfully submits that it is inherent in the specification to manufacture essentially the same apparatus that is claimed as an apparatus in independent claims 1-2 and the method of using which apparatus is claimed in independent claim 9. The claimed process is simply *providing* the elements recited in the other claims. It is customary to claim an invention in several alternative formats, including this format which is directed to invoking 35 U.S.C. § 271(g) to gain more complete statutory protection for the invention, as Congress contemplated when it passed

§ 271(g). An ordinary artisan would know, upon reading claim 13, that the claim is directed to manufacturing in a conventional manner the same subject matter claimed in the other independent claims. The disclosure of the original specification and the original claims necessarily and inherently discloses a claim to “providing” the elements of the other claims.

The specification has been amended to add proper antecedent basis for the claimed subject matter of the present invention, and/or such basis is inherently present in the specification as filed. Accordingly, withdrawal of the objection to the specification is respectfully requested.

## **II. CLAIM REJECTIONS UNDER 35 U.S.C. § 112**

In paragraph 5 of the Office action, the Examiner rejected claims 1 through 19 under the second paragraph of 35 U.S.C. § 112 for indefiniteness.

A. As to claim 1, line 10, Lim thanks the Examiner for carefully reviewing the claims and kindly pointing out this unfortunate typographic error by Lim that made his claim indefinite. The typographic error has been corrected by the amendment herein.

B. As to claim 2, the “means” has been amended to read “a jammed paper removing means for easily removing [improved removal of] a jammed sheet of paper.” Claim 9 has been similarly amended.

Lim respectfully submits that § 112 ¶ 6 permits an applicant to recite the function

of a means-plus-function claim at whatever level of generality or abstraction he chooses. This *means* is in fact literally what Lim calls it in claim 2. The typographic errors in the recitation have been removed, and the amended version (free of such typographic errors) legally complies with § 112 ¶ 6.

C. The typographic error of period for semicolon in the middle of claim 9 has been corrected.

D. Claim 9 and claims dependent therefrom are said to be ambiguous and are rejected, because claim 9 is a process claim and it has recitations of a product and “providing” the product. *Ex Parte Lyell*, 17 U.S.P.Q.2d 1548 (BPAI 1990), is cited in support of the rejection, as is MPEP § 2173.05(p)(II). *Lyell* holds that a single claim should not claim both an apparatus and a process, but should claim one or the other. The cited MPEP passage says no more. In *Lyell*, the challenged claim was a claim to an automatic transmission workstand and the method steps of using it. The instant claim 9 is nothing of the kind. Lim respectfully submits that the plain reading of claim 9 is that it is a claim to a “method of facilitating removal of a paper jam in an electro photo multi functional peripheral [“EPMFP”] apparatus.” The first step of the claimed method is “providing the apparatus with a jammed paper removing means for easily removing a jammed sheet of paper.” That is, the way you facilitate removal of a paper jam in an EPMFP apparatus is to provide the EPMFP apparatus with a recited means. Lim respect-

fully submits that such format does not remotely resemble claiming both an automatic transmission workstand and the method steps of using it. Rather, this is a method that you accomplish by providing a specified device as part of an EPMFP machine, like a method of improving safety on a bench saw by providing it with a fence. There is no legitimate objection to a method claim with an apparatus limitation in it, and neither *Lyell* nor the MPEP remotely suggests that there is.

Furthermore, the Federal Circuit has approved use of apparatus limitations in method claims. For example, in *Rockwell International Corp. v. United States*, 147 F.3d 1358, 1362 n.6, 47 USPQ2d 1027, 1029 n.6 (Fed. Cir. 1998), the court approved a claim to “[a]n organo-metallic process for producing an epitaxial film of Group III-V semiconductor disposed on a single crystal substrate, said process employing an open reactor....” The Federal Circuit held that the requirement that there be an “open reactor,” must be interpreted to be a limitation on the claim.

In addition, the Federal Circuit has repeatedly approved the use of “providing [a product element]” steps in method or process claims. For example:

1. In *Ruiz v. A.B. Chance Co.*, 234 F.3d 654, 57 USPQ2d 1161 (Fed. Cir. 2000), the Federal Circuit upheld a judgment of patent infringement based on a claim 1 that read “In a method of stabilizing the below-grade foundation of an existing building structure having a predetermined weight and an assumed live load, the improved steps of:

providing a foundation support for the foundation at a plurality of positions....”

2. In *Dow Chem Co. v. United States*, 226 F.3d 1334, 56 U.S.P.Q.2d 1014 (Fed. Cir. 2000), the Federal Circuit had no difficulty with the following claim, which is very similar to the instant claim of Lim:

In the method of emplacing a layer of solid particles in a subterranean void ..., comprising ... the improvement which comprises:

- a. providing a closed system between injection equipment for said mixture, said conduit and said void;
- b. providing a suspension of said carrier liquid and said solids; and
- c. injecting said suspension into said void through said conduit....

3. In *Robotic Vision Systems, Inc. v. View Eng'g, Inc.*, 189 F.3d 1370, 51 U.S.P.Q.2d 1948 (Fed. Cir. 1999), the Federal Circuit upheld claim 1, which was on a method for determining coplanarity of substrates comprising the steps of “(1) providing opaque fiducials as index pads.”

4. In *Mantech Environmental Corp. v. Hudson Environmental Services, Inc.*, 152 F.3d 1368, 47 U.S.P.Q.2d (BNA) 1732 (Fed. Cir. 1998), the Federal Circuit had no problem with the format of two patents with claims directed to “[a] method for remediating a hydrocarbon-contaminated region...comprising the steps of: (a) providing a plurality of...wells....”

Based on the Federal Circuit's precedents, Lim respectfully submits that claims 9-

12 are unambiguous process claims with lawful apparatus limitations therein, and that the claimed process under established Federal Circuit precedent legitimately utilizes the word “providing” to introduce the apparatus elements that are provided in order to execute the claimed process.

E. The same rejection is repeated on the ground that the structural limitations of claims 9-12 “do not positively recite or effect the method limitations as claimed in lines 9-13 of claim 9.” *Ex Parte Pfeiffer*, 135 USPQ 31 (BPAI 1961), is cited to support the rejection.

Claim 9 is a Jepson claim. Lim respectfully submits that the preamble (lines 3-7) limits the scope of the claim to removal of paper jams in only such apparatus as have the limitations of lines 3-7, or equivalents thereof. Step (1) following “the steps of:” invokes § 112 ¶ 6 and therefore invokes the corresponding part of the specification as a “glossary” for determining what structure is to be used to remove paper jams. *Chiuminatta Concrete Concepts v. Cardinal Indus., Inc.*, 145 F.3d 1303, 46 U.S.P.Q.2d 1752 (Fed. Cir. 1997). No provision of § 112 requires any more than that. Certainly nothing in § 112 ¶ 2 would suggest that Lim must be regarding as his invention something other than the language of claim 9.

*Pfeiffer* precedes establishment of the Federal Circuit by about 20 years and is in some respects inconsistent with Federal Circuit jurisprudence. However, it is completely

consistent with Federal Circuit precedent in holding, as the first point of decision, that the rejection cannot be sustained on the examiner's theory that structural limitations in a method claim are improper. 135 U.S.P.Q. at 33. The second point in the decision was a dictum that structural limitations in a method claim "must affect the method in a manipulative sense and not amount to the mere claiming of a particular structure." *Id.* That statement purports to be based on two 1961 CCPA decisions, *In re Moreton*, 288 F.2d 708, and *In re Fong*, 288 F.2d 932, neither of which so holds.

*Moreton* involved a claim to a use of a specific chemical as a lubricant in a conventional aircraft hydraulic system. The CCPA held the subject matter obvious because two references strongly suggested the claimed application. The opinion remarked in passing that the method was not manipulative, but it did not remotely suggest that being manipulative was a requirement for patentability of a method claim. *Fong* involved a claim to a new use for the old chemical PVP, namely, as a soil-suspending agent when washing clothes. The CCPA reversed the Board, because it had incorrectly refused to credit a Rule 132 affidavit that overcame a German patent on which the Board had relied. The claim whose rejection the CCPA reversed was to a (conventional) method of washing in which PVP and any detergent were used. Therefore, *Fong* upholds, rather than finds unpatentable, a method claim in which the only difference from the prior art is using a different product in the otherwise conventional process.



*Pfeiffer* miscited *Moreton* and *Fong*. To the extent that *Pfeiffer* can be justified at all, it is not for the dicta on which the instant office action relies. It is only because of its third point. That was that the claimed subject matter in that case was based on the “advantages inherently and necessarily flowing from the specific structural characteristics” of the known product used in the claimed method (135 U.S.P.Q. at 33). In other words, the subject matter was obvious because it was inherent in a prior art device used for the same purpose as was being claimed.

No cited decision requires that a limitation in a method claim must be “manipulative” to deserve consideration. The present rule in the Federal Circuit is to the contrary. Thus, *In re Lowry*, 32 F.3d 1579, 32 U.S.P.Q.2d 1031 (Fed. Cir. 1994), holds that *every* claim limitation must be considered in a § 103 analysis. Further, *In re Ochiai*, 71 F.3d 1565, 1569-70, 37 USPQ2d 1127 (Fed. Cir. 1995), holds that a conventional process, in which the only change is use of a different starting material so as to arrive at a different end product, is patentable.

F. Claims 13-19 are rejected on the ground that “providing steps” are improper because they do not say whether molding, bonding, welding, etc. is to be used to provide the designated product elements. Lim respectfully submits that this rejection is not well supported because it flies in the face of the Federal Circuit decisions in such cases as *Ruiz*, *Dow*, *Robotics*, and *Mantech*, *supra*. In each of those decisions, the Federal Circuit

approved of “providing steps” that did not mention whether molding, bonding, welding, etc. is to be used to *provide* the designated product elements.

G. Claims 13-19 are said to be ambiguous because they are directed to a process for manufacturing a product (an EPMF apparatus) wherein “providing” steps introduce the elements of the EPMF apparatus. Lim respectfully points out that in the Federal Circuit's *Ruiz* decision the court approved a claim to manufacturing an improved foundation by providing recited product elements. In the Federal Circuit's *Dow* opinion the court approved a claim to manufacturing a plug to fill up a hole in the ground by providing recited product elements.

H. The Examiner correctly points out that a number of claim elements in claims 15, 17-19 lack proper antecedents because claim 13 is recited instead of claim 14 as the base claim. Lim thanks the Examiner for carefully reviewing the claims and kindly pointing out these unfortunate typographic errors by Lim that made his claims indefinite. The typographic errors have been corrected by the amendment herein.

Thus, the claims of the present application have been amended to remove the basis for the § 112 rejections kindly set forth in detail by the Examiner. Accordingly, withdrawal of the § 112 rejection of claims 1 through 19 is respectfully requested.

### **III. CLAIM REJECTIONS UNDER 35 U.S.C. § 101**

A. In paragraph 7 of the Office action, the Examiner rejected claims 9 through 12

under 35 U.S.C. § 101 because these claims are said to embrace or overlap two different statutory classes of invention. Lim respectfully points out that claim 9 is a method claim, clearly directed to a “method of facilitating removal of a paper jam in an electro photo multi functional peripheral [“EPMFP”] apparatus.” The first step of the claimed method is “providing the apparatus with a jammed paper removing means for easily removing a jammed sheet of paper.” That is, the way that you facilitate removal of a paper jam in an EPMFP apparatus is to provide the EPMFP apparatus with a recited means. That claim format does not convert the claim to a product claim, or a hybrid between product and process, even assuming, *arguendo*, that the PTO has statutory authority to prohibit hybrid claims. (If it became relevant to patentability in this case, Lim would argue against existence of such authority under 35 U.S.C. § 6, since that would be substantive rule making.) The Federal Circuit's decisions in such cases as *Ruiz*, *Dow*, *Robotics*, and *Mantech*, *supra*, make it clear that “providing [a product element]” is a proper step in a claim to a manufacturing process.

B. Claims 13-19 are rejected (office action, ¶ 8) under 35 U.S.C. § 101 because these claims are said to embrace or overlap three different statutory classes of invention. The three classes are not identified and Lim respectfully submits that the rejection is not intelligible for that reason. Lim respectfully submits that these claims cannot possibly be drawn to an article of manufacture or composition of matter, so that the rejection is in

such form that it denies him a fair procedural opportunity to rebut it and prevents effective appellate review. Cf. *Gechter v. Davidson*, 116 F.3d 1454, 43 U.S.P.Q.2d 1030 (Fed. Cir. 1997). To the limited extent that Lim understands the rejection, it is duplicative of the immediately preceding rejection and he incorporates herein by reference his immediately preceding remarks.

**Claim Rejection under 35 U.S.C. § 103**

A. In paragraph 10 of the Office action, the Examiner rejected claim 1 under 35 U.S.C. § 103(a) for alleged unpatentability over “Applicant's Admitted Prior Art (Preamble-Jepson Claim)” in view of Sasaki *et al.* U.S. Patent No. 4,787,616.

Even assuming, *arguendo*, that the subject matter of the preamble is in the prior art,<sup>1</sup> a § 103 rejection must still comply with the requirements of a *Graham v. Deere* analysis to establish a *prima facie* case of obviousness, thereby satisfying *prima facie* the

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<sup>1</sup> Lim traverses that assertion and denies that by using Jepson format he admits that the elements of the preamble occurred in the prior art *combined in the manner described in the preamble*. Although each such element can be found in one or more prior art references, Lim believes that no reference can be cited for having all the elements combined as described. Lim does not contend, however, that combining these prior art elements as described in the preamble would be unobvious under § 103, but he questions whether any single reference shows them all combined in the manner stated. By using Jepson format, Lim simply disclaims making any assertion that it was inventive and unobvious to use the elements of the preamble in combination. If it is inventive, Lim dedicates such subject matter with this disclosure, for he regards as his invention only the combination of such preamble subject matter with the subject matter following the “improvement comprising” clause of the claim. Lim respectfully notes that a concession that each element existed in the prior art and that it would not be inventive to combine them as stated is, in any event, *not* the same thing as a concession that a further jump from that combination to the claimed combination is obvious.

Lim does not make a point of this matter at this time, because it is moot—given the several other reasons why the rejection is unsupported.

PTO's burden to prove non-entitlement to a patent. But important preliminary factual elements of that analysis are missing here, and so too is the necessary legal analysis that *Gechter v. Davidson*, 116 F.3d 1454, 43 U.S.P.Q.2d 1030 (Fed. Cir. 1997), requires the PTO to build upon the factual underpinnings.

1. In *In re Dembiczak*, 175 F.3d 994, 50 USPQ2d 1614 (Fed. Cir. 1999), the Federal Circuit overturned an obviousness rejection because of its failure to make the kind of obviousness legal analysis that the Supreme Court commanded in *Graham v. John Deere Co.*, 376 U.S. 1, 17-18 (1966). Such a legal analysis must begin, the Federal Circuit has consistently held, with making specific findings of fact regarding the level of ordinary skill in the art. Thus the *Dembiczak* decision held that an obviousness rejection must be reversed if, like the instant rejection, it fails to contain “specific findings of fact regarding the level of ordinary skill in the art.” 175 F.3d at 1000-01, 50 USPQ2d at 1618. In addition, the findings that the PTO makes on the ordinary level of skill must be supported by substantial evidence of record. *In re Kaplan*, 789 F.2d 1574, 1580, 229 USPQ 678, 683 (Fed. Cir. 1986) (“Even if obviousness of the variation is predicated on the level of skill in the art, prior art evidence is needed to show what that level of skill was.”). See also *In re Mayne*, 104 F.3d 1339, 1341, 41 USPQ2d 1451, 1453 (Fed. Cir. 1997) (“The foundational facts for the prima facie case of obviousness are: ... (3) the level of ordinary skill in the art.”).

Thus, the rejection in this office action lacks findings and analysis that the Federal Circuit considers essential to support a rejection based on ordinary skill in the art. In addition, the rejection in this office action lacks substantial evidence of record to support such findings, even if they had been made. Where, as here, the record does not contain substantial evidence to support necessary findings, the PTO's action will not be sustained. *In re Zurko*, Fed. Cir., Aug. 2, 2001.

2. Even if the record had proper findings on level of skill based on substantial evidence, the rejection would still be fatally insufficient because there is no support for adapting the prior art apparatus to accept inclusion of the Sasaki device and for making the combination. Before the PTO may combine the disclosures of two or more prior art references in order to establish *prima facie* obviousness, there must be some suggestion for doing so, found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1998)(teaching or motivation or suggestion to combine is an “essential evidentiary component of an obviousness holding”); *ATD Corp. v. Lydall, Inc.*, 159 F.3d 534, 546, 48 U.S.P.Q.2d 1321 (Fed. Cir. 1998)(“There must be a teaching or suggestion within the prior art, or within the general knowledge of a person of ordinary skill in the field of the invention, to look to particular sources of information, to select particular elements, and to combine them in the way they were combined by the

inventor.”); *In re Rouffet*, 149 F.3d 1350, 1355, 47 U.S.P.Q.2d 1453 (Fed. Cir. 1998); *In re Chu*, 66 F.3d 292 (Fed. Cir. 1995); *Heidelberger Druckmaschinen AG v. Hantscho Commercial Prods., Inc.*, 21 F.3d 1068, 1072 (Fed. Cir. 1994)(“When the patented invention is made by combining known components to achieve a new system, the prior art must provide a suggestion or motivation to make such a combination.”); *In re Jones*, 958 F.2d 347, 351, 21 U.S.P.Q.2d 1941, 1943-44 (Fed. Cir. 1992); *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d 1586, 1589-90 (Fed. Cir. 1988); *In re Geiger*, 815 F.2d 686, 688 (Fed. Cir. 1987); *ACS Hosp. Sys., Inc. v. Montefiore Hosp.*, 732 F.2d 1572, 1577, 221 U.S.P.Q.2d 929, 933 (Fed. Cir. 1984).

Absent such a showing, we have mere hindsight. That occurred here. The PTO just used Lim's disclosure as a template for picking and choosing among the elements of the prior art. “Combining prior art references without evidence of such a suggestion, teaching or motivation simply takes the inventor's disclosure as a blueprint for piecing together the prior art to defeat patentability.” Doing that is “the essence of hindsight.” *In re Dembiczak*, 175 F.3d 994, 999, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999). There must be “particular findings regarding the locus of the suggestion, teaching, or motivation to combine the prior art references.” *Id.* at 1000. The PTO must explain, as it did not do here, what specific understanding or technical principle would have suggested the combination of references. *Id.*; *In re Rouffet*, 149 F.3d 1350, 1357, 47 U.S.P.Q.2d 1453, 1459 (Fed.

Cir. 1998). That is all missing here.

3. Further, there is no *Graham v. Deere* analysis built on the nonexistent findings. Why would it have been obvious to an artisan of ordinary skill? What is the size of the gap between the prior art and Lim's invention? Why would it have been easy for an ordinary artisan to leap the gap? What would have caused an ordinary routineer to do so? It is not enough just to make a conclusory statement to this effect. The Federal Circuit's *Gechter* decision holds to the contrary. It requires a reasoned explanation.

4. In addition, even if it were proper simply to combine the elements of Sasaki and the various prior art devices, the rejection would still be unsupported because the cited references do not contain all elements of the claimed device. When an invention is alleged to be obvious from a combination of references, the combination must disclose *all of the elements* of the invention. No claim limitation can be ignored in making a patentability analysis under § 102 *or* under § 103. *In re Lowry*, 32 F.3d 1579, 1582, 32 U.S.P.Q.2d 1031 (Fed. Cir. 1994) (“The PTO must consider all claim limitations when determining the patentability of an invention over the prior art.”). See also *Al-Site Corp. v. VSI Int'l*, 174 F.3d 1308, 1324, 50 U.S.P.Q.2d 1161 (Fed. Cir. 1999). In that case, the Federal Circuit held that a claim was not shown to be obvious from the Seaver patent. The reason was that “although the Seaver patent discloses some of the elements recited in the Magnivision patents' claims, it does not disclose the display member, the cantilevered



support, or the aperture for mounting the hanger tag on the cantilevered support,” and the art of record did not suggest adding those elements to Seaver.

The problem with the rejection is that Sasaki is incorrectly cited for the idea that it discloses the claim's “means for increasing expansibility of the optional auxiliary device, said means comprising a first paper transport path, a second paper transport path, and a third paper transport path for discharging the sheets of recording paper which the feeding unit has fed.” The means for increasing expansibility of Sasaki's second embodiment, described at col. 13:3-65, is not the same structure as is described in Lim's specification as the means for increasing expansibility of the optional auxiliary device. But according to *Chiuminatta Concrete Concepts v. Cardinal Indus., Inc.*, 145 F.3d 1303, 46 U.S.P.Q.2d 1752 (Fed. Cir. 1997), the structure described in Lim's specification as the means for increasing expansibility of the optional auxiliary device is incorporated by reference into the claim, like with a glossary. The missing structural elements must be supplied by a reference, to support a § 103 rejection. Where is that reference?

Here  
allegations  
of non-  
equivalence  
are not  
sufficient  
(see MPEP  
2184)

The § 103 rejection is unsupportable on multiple grounds. Lim therefore respectfully submits that the rejection should be withdrawn.

B. In paragraph 11 of the office action, claim 1 was further rejected under 35 U.S.C. § 103(a) for alleged unpatentability over Sasaki '616 in view of Takahashi *et al.* U.S. Patent No. 5,379,101 and Arai U.S. Patent No. 6,145,828. As with the preceding §

103 rejection, the record contains no evidence-based findings on level of skill or as to any teaching, motivation, or suggestion in the prior art to combine the cited three references. Also, there is no *Graham v. Deere* analysis. Lim incorporates herein by reference his immediately preceding remarks as to those issues.

Furthermore, the rejection incorrectly cites the three references as collectively disclosing all elements of the claim. But none of them singly or in combination discloses all elements of the structure that Lim describes in his specification as the means for increasing expansibility of the optional auxiliary device, which is incorporated into the claim from the specification per *Chiuminatta Concrete Concepts v. Cardinal Indus., Inc.*, 145 F.3d 1303, 46 U.S.P.Q.2d 1752 (Fed. Cir. 1997).

C. In paragraph 12 of the Office action, the Examiner rejected claims 2 through 5, 7, and 13 through 16 under 35 U.S.C. § 103(a) for alleged unpatentability over applicant's admitted prior art in view of Arai '828. As with the preceding § 103 rejection, the record contains no evidence-based findings on level of skill or as to any teaching, motivation, or suggestion in the prior art to combine the cited references. Also, there is no *Graham v. Deere* analysis. Lim incorporates herein by reference his immediately preceding remarks as to those issues.

In addition, Arai does not disclose Lim's "jammed paper removing means for easily removing a jammed sheet of paper." Arai discloses a means for jam removal, but it

is not the means that Lim's specification describes. Yet Arai must disclose that to satisfy *Lowry, supra*. Claim 2 is clearly a means-plus-function claim that invokes § 112 ¶ 6 under the PTO Guidelines for means-plus-function claims. Therefore, claim 2 incorporates the corresponding structure from the specification, per *Chiuminatta*.

As described in col. 9:22, which the office action cites, Arai detects a jam with a sensor. The operator opens the doors and withdraws section 20 forwards after unlocking the lock mechanism. In the event of a sheet jam between the lower conveyor 32 and the upper conveyor 33, grip 58 is initially grasped, and the upper conveying guide 50 is lifted to turn the dual-sided copying section 20, as shown in FIG. 7(b). Linkage 34 rotates counterclockwise (col. 9:35). The office action states that linkage 34 reads on the instant specification's elastic member. The instant specification (p. 12, lines 15-16) describes the elastic member as follows: "an elastic member such as a tension coil spring is provided between cover plate 23 and base member 21." In contrast, Arai describes his linkage 34 in terms making it clear that it is made up of rigid metal parts (col. 8:66-col. 9:8):

...the linkage 34 has a link main body 60; a fitting 61 formed on one end of the link main body 60; an L-shaped slot 62 formed in the other end of the link main body 60; and a grip portion 63 bent frontward from the upper edge of the link main body 60. The link main body 60 is a fan-shaped plate element and is pivotably supported on the base end of the upper conveying guide 50 of the upper conveyor 33 by the fitting 61. The fitting 61 is pivotably supported on a turning

pin 65 provided on a lateral frontward surface of the upper conveying guide 50.

Accordingly, Arai's linkage does not read on Lim's elastic member. To further distinguish the respective elements, by amendment herein the elastic member wherever recited is now further limited by the term "spring" as indicated in the above quoted passage from p. 12 of the specification. In any event, regardless of the amendment, it is clear that Arai's sheet jam removal means with rigid parts is not structurally the same as or an equivalent of Lim's "elastic member such as a tension coil spring." To the contrary, it operates in a different way to accomplish a different result, and it is not just insubstantially different. Under *In re Donaldson Co.*, 16 F.3d 1189, 29 U.S.P.Q.2d 1845 (Fed. Cir. 1994)(en banc), the structural difference overcomes the rejection.

The statement is made (office action, p. 9) that it would be an obvious design choice to use the linkage 34 of Arai and the elastic member of Lim interchangeably. It is also said that Lim's "invention would perform equally well with a linkage" as with an elastic member such as a tension spring. These statements are conjecture, unsupported by a citation and they are traversed. Lim respectfully notes that such statements also are prohibited as a basis for a rejection, by the Federal Circuit's very recent *Zurko* decision.

The tension coil spring (or an equivalent such as an appropriate cantilever spring member) stores energy when the cover plate 23 and base member 21 are moved relatively,

and by the same token the spring respectively aids or resists such movement of elements 23 and 21, depending on respective direction of motion, so that they can be guided exactly into place or proper registration with one another. This assists in carrying out the function described in the last sentence beginning at the bottom of p. 15 of the instant specification: "Therefore, the position of the multipurpose feeding unit assembly 20 is exactly guided and prevented from being arbitrarily moved forward." A device that did not store energy, such as Arai's linkage of rigid metal parts, could not do this.

The office action also asserts (p. 9) that it was obvious to use two upper cover plates instead of one. No art is cited. The only citation is to the venerable decision of the Seventh Circuit in *St. Regis Paper Co. v. Bemis Co.*, 549 F.2d 833 (7th Cir.), *cert. denied*, 434 U.S. 833 (1977), which is not precedential in the Federal Circuit. Lim respectfully traverses the rejection and points out, with all due respect, that it is the burden of the PTO to establish unpatentability, e.g., *In re Dembiczak*, 175 F.3d 994, 1001, 50 U.S.P.Q.2d 1614 (Fed. Cir. 1999); *In re Epstein*, 32 F.3d 1559, 1564 (Fed. Cir. 1994); *In re Rijckeart*, 9 F.3d 1551, 1552, 24 U.S.P.Q.2d 1443, 1444 (Fed. Cir. 1992); *In re Fine*, 837 F.2d 1071, 1074, 5 U.S.P.Q.2d 1596 (Fed. Cir. 1988), and that a mere assertion that something is obvious, undocumented by references or prior art, is not acceptable to the Federal Circuit. See, e.g., the August 2001 *Zurko* decision. *Per se* rules of unpatentability, such as that on which this rejection is based, are not acceptable to the Federal Circuit. *Litton*

*Systems, Inc. v. Honeywell, Inc.*, 87 F.3d 1559, 1567, 39 USPQ2d 1321, 1325 (Fed. Cir. 1996) (“[T]he obviousness inquiry is highly fact-specific and not susceptible to per se rules.”). The Federal Circuit explained this at length in *In re Ochiai*, 71 F.3d 1565, 1572, 37 USPQ2d 1127, 1133 (Fed. Cir. 1995):

The use of per se rules, while undoubtedly less laborious than a searching comparison of the claimed invention—including all its limitations—with the teachings of the prior art, flouts section 103 and the fundamental case law applying it. ... Per se rules that eliminate the need for fact-specific analysis of claims and prior art may be administratively convenient for PTO examiners and the Board. ... But reliance on per se rules of obviousness is legally incorrect and must cease. Any such administrative convenience is simply inconsistent with section 103, which, according to *Graham* and its progeny, entitles an applicant to issuance of an otherwise proper patent unless the PTO establishes that the invention as claimed in the application is obvious over cited prior art, based on the specific comparison of that prior art with claim limitations.

D. In paragraph 13 of the Office action, the Examiner rejected claims 2 through 5, 7, 9 through 16, and 18 under 35 U.S.C. § 103(a) for alleged unpatentability over Sasaki '616 in view of Arai '828. In response, Lim respectfully incorporates herein by reference his preceding remarks.

E. In paragraph 14 of the Office action, the Examiner rejected claims 6 and 17 under 35 U.S.C. § 103(a) for alleged unpatentability over applicant's admitted prior art in

view of Arai '828, and further in view of Yim U.S. Patent No. 5,944,307. In paragraph 15, a similar rejection is based on Sasaki and Yim. In response, Lim respectfully incorporates herein by reference his preceding remarks.


F. In paragraph 16 of the Office action, the Examiner rejected claims 8 and 19 under 35 U.S.C. § 103(a) for alleged unpatentability over applicant's admitted prior art in view of Arai '828, and further in view of Mochimaru U.S. Patent No. 4,605,299. In response, Lim respectfully incorporates herein by reference his preceding remarks.

G. In paragraph 17 of the Office action, the Examiner rejected claims 8 and 19 under 35 U.S.C. § 103(a) for alleged unpatentability over Sasaki '616 in view of Arai '828, and further in view of Mochimaru '299. In response, Lim respectfully incorporates herein by reference his preceding remarks.

For the reasons stated above, it is submitted that the invention recited in the claims, as now amended, is distinguishable from the prior art cited by the Examiner so as to preclude rejection under 35 U.S.C. § 103. In view of the above, it is submitted that the claims of this application are in condition for allowance, and early issuance thereof is solicited.

A fee of \$110.00 is incurred by the filing of a Petition for a one-month extension of time. Applicant's check drawn to the order of Commissioner accompanies this Amendment After Final. Should the check become lost, be deficient in payment, or should other fees be incurred, the Commissioner is authorized to charge Deposit Account No. 02-4943 of Applicant's undersigned attorney in the amount of such fees.

Respectfully submitted,

  
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**MARKED-UP VERSION OF AMENDMENTS**

**IN THE ABSTRACT**

Please amend the Abstract as follows:

An electro photo multi functional peripheral apparatus [comprises] includes a main body which is provided with an optional device such as a sorter, a power stacker and a large scale paper feeding unit at one side thereof. A feeding unit for feeding a recording paper is mounted at the other side of the main body. A feeding cassette is mounted at a lower portion of the main body. A multipurpose feeding unit assembly is removably mounted at a center portion of the main body and horizontally transports the recording paper fed from the feeding unit. The main body is formed with a first, a second and a third paper transport paths for discharging the recording paper fed from the optional device.

**IN THE SPECIFICATION**

1. Please amend the first paragraph on page 3, from line 1 through line 6, as follows:

Particularly, when a paper jam occurs and is detected, it is very complicated to

remove the jammed paper sheet. First, a top cover 4 is opened and a developer 5 is taken out of the main body. Then, the jammed paper sheet is removed. After that, the developer is received again in the main body and the top cover is closed. Further, in case the jammed paper sheet is mechanically caught by a roller, it is very difficult to remove the jammed paper sheet, since the jammed paper sheet is crumpled or torn.

2. Please amend the paragraph on page 3, from line 11 through line 13, as follows:

Another object of the present invention is to provide an electro photo multi functional peripheral apparatus which allows a jammed paper sheet to be easily removed after it has been detected.

3. Please amend the paragraph bridging pages 8 and 9, from line 10 on page 8 through line 1 on page 9, as follows:

Fig. 3 is a schematic view showing a structure of an electro photo multi functional peripheral apparatus according to the present invention. As shown in Fig. 3, the electro photo multi functional peripheral apparatus according to the present invention is provided

with a separate receiving space 11 at a center portion of a main body 10. A separate multipurpose feeding unit assembly 20 for horizontally transporting a paper sheet is removably mounted in receiving space 11. Therefore, when a paper jam has occurred in the multipurpose feeding unit assembly 20 and has been detected, the jammed paper sheet can be easily removed. The electro photo multi functional peripheral apparatus has a simple structure to secure the expansibility of the optional device and be facile to remove the jammed paper sheet.

4. Please amend the paragraph bridging pages 9 and 10, from line 18 on page 9 through line 10 on page 10, as follows:

Duplex module 12' may be removably mounted at main body 10 or fixedly mounted at main body 10. In the following embodiment of the present invention duplex module 12' is attached at the main body 10. As shown in Figs. 5 to 10, multipurpose feeding unit assembly 20 comprises a rectangular base member 21. A guiding means is disposed at a portion of base member 21 and guides a backward and forward movement of multipurpose feeding unit assembly 20. A front cover 22 is fixed to a front face of base member 21. At least one cover plate 23 is mounted on an upper face of base member 21. A paper feeding means is mounted at base member 21 and cover plate 23. A

power transmitting means transmits power to the paper feeding means. A jammed paper removing means easily removes a jammed paper sheet when a paper sheet is jammed and the paper jam has been detected.

5. Please amend the first complete paragraph on page 15, from line 4 through line 12, as follows:

If the recording paper is jammed in multipurpose feeding unit assembly 20, after the paper jam is detected, first, a user pulls multipurpose feeding unit assembly 20 in a direction corresponding to arrow E of Fig. 6. At this time, grasping groove 22a in front cover 22 assists in the withdrawing operation of multipurpose feeding unit assembly 20. Then, after multipurpose feeding unit assembly 20 is withdrawn by a desired length, the user raises cover plate 23 upward. Cover plate 23 is then revolved with hinge shaft 81 in the center, so that a portion between feeding rollers 41 and 42 and pinch rollers 51 and 52 is exposed to the outside. Therefore, the user can easily remove the jammed paper.

**IN THE CLAIMS**

Please amend claims 1 through 5, 9, 12, and 15 through 19, as follows:

1           1 (amended twice). In an electro photo multi functional peripheral apparatus  
2 comprising:

3           a main body having an optional auxiliary device located at a first side thereof;

4           a feeding unit for feeding sheets of recording paper, said feeding unit located at a  
5           second side of the main body;

6           a feeding cassette mounted at a lower portion of the main body; and

7           a feeding unit assembly removably mounted at a central portion of the main body,  
8           for transporting the sheets of recording paper which the feeding unit feeds;

9           *the improvement comprising:*

10          a means for increasing expansibility of the optional auxiliary device, said means  
11          comprising a first paper transport path, a second paper transport path, and a  
12          third paper transport path for discharging the sheets of recording paper  
13          which the feeding unit has fed.

1           2 (amended twice). In an electro photo multi functional peripheral apparatus  
2 comprising:

3 a main body having an optional auxiliary device located at a first side thereof;  
4 a feeding unit for feeding sheets of recording paper, located at a second side of the  
5 main body;  
6 a feeding unit assembly removably mounted at a central portion of the main body,  
7 for transporting the sheets of recording paper which the feeding unit feeds,

8 *the improvement comprising:*

9 a feeding unit assembly comprising a jammed paper removing means for easily  
10 removing [improved removal of] a jammed sheet of paper.

1 3 (amended twice). The apparatus of claim 2, wherein said jammed paper  
2 removing means comprises:

3 a rectangular base member;  
4 at least one cover plate mounted on an upper face of the base member;  
5 paper feeding means for feeding the sheets of recording paper, said paper feeding  
6 means mounted at the cover plate; and  
7 a guiding means for guiding a backward and forward movement of the feeding unit  
8 assembly.

1 4 (amended twice). The apparatus of claim 3, wherein said paper feeding means

comprises:

at least two cover plates mounted on the upper face of the base member;

a plurality of powered feeding rollers mounted on a rear side of the base member; and

a plurality of pinch rollers rotatably mounted at the cover plates and located opposite the feeding rollers.

5 (amended twice). The apparatus of claim[s] 4, wherein:

at least one cover plate of said jammed paper removing means comprises a hinge shaft

centrally located in said cover plate, said hinge shaft adapted for revolving said

cover plate; and

wherein an elastic spring member is provided between the cover plate and the base member.

9 (amended twice). A method of facilitating removal of a paper jam in an electro photo multi functional peripheral apparatus comprising:

a main body having an optional auxiliary device located at a first side thereof;

a feeding unit for feeding sheets of recording paper, located at a second side of the main body;

a feeding unit assembly removably mounted at a central portion of the main body,

7                   for transporting the sheets of recording paper which the feeding unit feeds,  
8   said method comprising the steps of:

9           (1) providing the apparatus with a jammed paper removing means for easily  
10           removing [improved removal of] a jammed sheet of paper[.]

11           (2) detecting a paper jam; and

12           (3) operating the jammed paper removing means in a manner such that the paper  
13           jam is removed.

1           12 (amended twice). The method of claim 11, wherein:

2   at least one cover plate of said jammed paper removing means comprises a hinge shaft  
3           centrally located in said cover plate, said hinge shaft adapted for revolving said  
4           cover plate; and

5   wherein an elastic spring member is provided between the cover plate and the base  
6           member.

1           13 (amended twice). A process for manufacturing an electro photo multifunction  
2   apparatus, said process comprising the steps of:

3           (1) providing a main body having an optional auxiliary device located at a first side  
4           thereof;



5 (2) providing a feeding unit for feeding sheets of recording paper, located at a  
6 second side of the main body; and

7 (3) providing a feeding unit assembly removably mounted at a central portion of  
8 the main body, for transporting the sheets of recording paper from the feeding unit;

9 *the improvement in said process comprising:* providing said feeding unit assembly with a  
10 jammed paper removing means for improved removal of a jammed sheet of paper.

1 14 (amended twice). The process of claim 13, wherein said jammed paper  
2 removing means comprises:

3 a rectangular base member;

4 at least one cover plate mounted on an upper face of the base member;

5 paper feeding means for feeding the sheets of recording paper, said paper feeding  
6 means mounted at the base member and the cover plate; and

7 a guiding means for guiding a backward and forward movement of the feeding unit  
8 assembly.

1 15 (amended). The process of claim [13]14, wherein said paper feeding means  
2 comprises:

3 a plurality of powered feeding rollers mounted on a rear side of the base member;

4 and

5 a plurality of pinch rollers rotatably mounted at the at least one cover plate[s],

6 located opposite the feeding rollers.

1 16 (amended). The process of claim 14, wherein:

2 at least one cover plate of said jammed paper removing means comprises a hinge shaft

3 centrally located in said cover plate, said hinge shaft adapted for revolving said

4 cover plate; and

5 wherein an elastic spring member is provided between the cover plate and the base

6 member.

1 17. (amended). The process of claim [13]14, wherein the guiding means is a pair

2 of guiding rollers rotatably mounted at the base member.

1 18 (amended). The process of claim [13] 14, wherein said jammed paper

2 removing means comprises a front cover fixed to a front face of the base member, the

3 front cover comprising a grasping groove at a central portion thereof to facilitate

4 receiving and withdrawing the feeding unit assembly.

1           19 (amended). The process of claim [13] 14, wherein said jammed paper  
2 removing means comprises:

3           a plurality of position guiding members fixed to a rear side of the base member;

4           and

5           a corresponding plurality of position guiding holes formed at an inner portion of

6           the main body, into which the position guiding members are respectively

7           inserted.